Changes in infants faecal characteristics and microbiota by inulin supplementation.

Abstract

The effects of inulin on the microbial composition and faecal characteristics in 36 healthy, formula-fed infants (average age 7.7 months) given 3 different daily dosages of native inulin (0.75 g/day, 1.00 g/day, and 1.25 g/day) were studied. At all levels of inulin consumption, a significant ($p<0.05$) reduction of potential pathogenic microorganisms such as clostridia was found. An intake of 1.25 g/day of inulin caused a significant ($p<0.05$) increase of Bifidobacterium spp. as well as a significant ($p<0.05$) decline in Gram-positive cocci and coliform bacteria. Inulin consumption resulted in a significant ($p<0.05$) decrease in faecal pH value and changes in faecal weight, faecal texture and colour, indicating improvement in healthy bile production and bacterial fermentation. It is concluded that inulin consumption in formula-fed infants after weaning positively affected the microbial composition of faeces and faecal properties.

Keyword: Inulin; Stool properties; Microbiota; Formula-fed; Infants.